

PROPOSED REJECTION OF THE NEOTYPE AND TYPE-LOCALITY OF
THAMNOPHIS SIRTALIS (LINNAEUS, 1758) (REPTILIA). Z.N.(S.) 1600

By Francis Cook (*National Museum of Canada, Ottawa, Ontario*)

The purpose of this submission is to show that the type-locality for *Thamnophis sirtalis* (Linnaeus), validated by Opinion 385 of the International Commission on Zoological Nomenclature (1956, *Ops. Decls. int. Comm. zool. Nomencl.* 12 : 191-230), was originally restricted in error. In accordance with recommendation 72E of the *International Code of Zoological Nomenclature*, 1961 the Commission is requested to set aside that part of the original ruling pertaining to the type-locality of *sirtalis* and replace it with an indisputable type-locality restriction.

2. *Thamnophis sirtalis* (Linnaeus) remained unchallenged as the legal name for the Eastern Garter Snake from 1758 until Klauber (1948, *Copeia* (1) : 1-14) pointed out that it had been incorrectly applied. In the original description of *Coluber sirtalis* Linnaeus (1758, *Syst. Nat.* ed. 10, p. 22) based on a specimen from "Canada" collected by Kalm, the subcaudal scale count was given as 114. Among the snakes of eastern North America which fit the simple Linnaean description only the Eastern Ribbon Snake has this many subcaudal scales. By strict rule of priority, therefore, *sirtalis* is the correct name for the Eastern Ribbon Snake, and the name it has long been known under, *sauritus* Linnaeus, 1766, is a synonym. The first name with a description that fits the Eastern Garter Snake is *ordinatus* (as first published in the combination *Coluber ordinatus* Linnaeus, 1766, *Syst. Nat.* ed. 12, p. 385). The strict legality of this arrangement has never been questioned since Klauber unveiled it.

Due to the confusion that would have followed such a major name shuffle (and indeed did follow to some extent after publication of Klauber's article) of two common and well-known species, Schmidt and Conant (1951, *Bull. zool. Nomencl.* 2 : 67-68) proposed that the plenary powers of the International Commission of Zoological Nomenclature be used to validate the use of *sirtalis* for the Eastern Garter Snake and that this name should "... apply to the species described and figured as *Tropidonotus sirtalis* by J. E. Holbrook in 1842 in *North American Herpetology : or a description of the reptiles inhabiting the United States*, Philadelphia, Dobson ; 5 vols., illus. (Vol. 4 : 41, pl. 11) and that "Canada" (restricted to the vicinity of Quebec, see Robert F. Inger, 1946, *Copeia* 1946 : 254) is to be treated as the type-locality of the species "...".

4. A counter proposal, that *sirtalis* be suppressed by placing it on the Official Index of Rejected and Invalid Specific Names in Zoology, *ordinatus* be recognized for the Eastern Garter Snake, and *sauritus* for the Eastern Ribbon Snake, both to be placed on the Official List of Specific Names in Zoology, was made by Dowling (1952, *Bull. zool. Nomencl.* 6 : 144-146).

5. In a vote by the Commission the Schmidt and Conant proposal was accepted and, therefore, the Dowling alternative rejected (Opinions and Declarations Rendered by the International Commission on Zoological Nomenclature 12 (pt. 6) : Opinion 385, p. 214).

6. However, due to two decisions by the Fourteenth International Congress of Zoology, Copenhagen, 1953, which granted official recognition to neotypes and made provision for designating type-localities, Schmidt and Conant submitted an amendment (*op. cit.* pp. 224-228) to their original proposal. This amendment designated as neotype of *sirtalis*, a specimen from the Royal Ontario Museum of Zoology and Palaeontology collection catalogued as 7167 (subsequently recatalogued as 73660 in the Chicago Natural History Museum and retained there) from "Quebec, Quebec County, Province of Quebec, Canada" (*op. cit.* p. 228). A vote on the amendment overwhelmingly accepted it (*op. cit.* p. 321).

7. This ruling made the following entry to the Official List of Specific Names in Zoology (*op. cit.* p. 193):

sirtalis. Linnaeus, 1758, as published in the combination *Coluber sirtalis*, the nominal species so named to be interpreted by reference to the neotype validated under the plenary powers . . . , the Restricted Locality for this nominal species to be:—"City of Quebec, Quebec County, Quebec Province, Canada" (Name No. 676).

8. In 1959, Bleakney (*Copeia* 1959(1): 52-56) analyzed the variation of *Thamnophis sirtalis* in eastern and central Canada. In this paper he described the consistent colour variant of the northeast section of the species' range under the resurrected name *Thamnophis sirtalis pallidula* Allen, 1899. The range of this subspecies was defined as ". . . throughout the Atlantic provinces (exclusive of Newfoundland), westward into New Hampshire and thence northward to James Bay and eastward again along the north shore of the Gulf of St. Lawrence . . . In southern Quebec and northern New York State *pallidula* makes contact with a population of *sirtalis* . . ." (Bleakney, *op. cit.* pp. 54-55). The range map (p. 53) clearly shows *pallidula* in the area of Quebec City, with the zone of intergradation southwest of it.

9. Logier and Toner (1961, *Check List of the Reptiles and Amphibians of Canada and Alaska*) accepted Bleakney's recognition of *T. s. pallidula* and plotted the intergradation zone as he had presented it. Listed and mapped under *T. s. pallidula* was an R.O.M. specimen from Quebec City. This is the same locality as the R.O.M. specimen designated by Schmidt and Conant as the neotype of *Thamnophis sirtalis*.

10. If the neotype and type-locality restriction by Schmidt and Conant are accepted, then the name for the Maritime Garter Snake (referred to as *Thamnophis sirtalis pallidula* by Bleakney, and Logier and Toner) becomes *Thamnophis sirtalis sirtalis* (Linnaeus) and the rest of the eastern populations should be designated *Thamnophis sirtalis ordinatus* (Linnaeus).

11. However, this change is unnecessary as the original type-locality restriction is without basis. When Inger (1946, *Copeia* 1946: 254) restricted the type-locality he based his decision on the assumption that the Linnean description was based on a specimen of the Eastern Garter Snake. As Linnaeus (1758, *Syst. Nat.* ed. 10, p. 22) cited only "Canada" as the "habitat" (=type-locality) and gave Kalm as the collector, a careful study was made by Inger of *Peter Kalm's Travels in North America* (revised and edited by Adolph B. Benson, New York, 1937). The only mention of snakes referred to the vicinity

of Quebec City. Therefore, Inger legitimately reasoned that it was most likely that the specimen sent to Linnaeus had been collected at this locality. However, now that it is generally agreed that the Kalm specimen was *not* a Garter Snake but a Ribbon Snake (although the name has been assigned to the Garter Snake, the identity of the actual specimen on which it was based cannot be changed by a ruling of the Commission) then it *could not* have been collected at Quebec City. Aside from the relic population in climatically favourable south-western Nova Scotia, the easternmost record of the Ribbon Snake in Canada is in the Horseback Mountains, two miles west of Pakenham, Ontario, about 26 miles southwest of Ottawa. There are no records from anywhere in the province of Quebec, and the nearest Southern reports are from southern New Hampshire, Vermont and New York States. The locality where Kalm's specimen came from is unknown.

12. Therefore, this type-locality, chosen for the Eastern Garter Snake on the basis of the hypothetical origin of a specimen which actually was an Eastern Ribbon Snake and could *not* have been collected at that locality, has no validity for the Eastern Garter Snake.

13. Recommendation 72E. Type-localities, in the new *International Code of Zoological Nomenclature*, 1961 (adopted by the XV International Congress of Zoology, p. 77) states that "If a type-locality was erroneously designated or restricted it shall be corrected".

14. Since the Linnaean specimen is not the basis for the taxon *sirtalis*, then the locality where it was collected, wherever in Canada it was, should not be the basis for the type-locality of *sirtalis*. The reasonable solution is to return to the original Schmidt and Conant proposal and base *sirtalis* on the description by Holbrook (*op. cit.*). Following the reasoning outlined in selecting a type-locality for *sauritus* (Opinions and Declarations rendered by the International Commission of Zoological Nomenclature, Opinion 385, Appendix, p. 226) where the type-locality was designated for that species as "neighbourhood of Charleston, South Carolina" because Holbrook resided there while writing *North American Herpetology*, the same locality could be designated as the type-locality for *sirtalis*.

15. Besides being the logical method of stabilizing the name *sirtalis* from a description of *sirtalis* in the region where the Garter Snake was first recognized under the name *sirtalis*, the connection has as a fortunate by-product that the Maritime Garter Snake remains as *Thamnophis sirtalis pallidula* and the Eastern Garter Snake as *Thamnophis sirtalis sirtalis* and avoiding further confusion in *Thamnophis* literature.

16. It is proposed that the International Commission, which originally approved the restricted type-locality of *sirtalis* as "Quebec, Quebec County, Province of Quebec, Canada" and the neotype specimen as No. 73660 in the Chicago Natural History Museum from the above locality, set aside that portion of the amendment to Opinion 385 in which this type-locality and neotype appeared, thus rejecting any official status for both. The Commission is further asked to rule that the name *sirtalis* should "... apply to the species described and figured as *Tropidonotus sirtalis* by J. E. Holbrook in 1842 in *North American Herpetology*; or a description of the reptiles inhabiting the United

States, Philadelphia, Dobson ; 5 vols., illus. (Vol. 4 : 41, pl. 11) ", as originally proposed by Schmidt and Conant, and that the type-locality be designated as "neighbourhood of Charleston, South Carolina" as it was done for *Thamnophis sauritus*, which by Commission ruling, is also based on the description by Holbrook.

17. The writer does not recommend the selection of a new neotype from this type-locality. It is believed that the selection of a neotype at this time is unnecessary as the basis for the species and the type-locality have been defined, and the selection would best be made by some future researcher who attempts a monographic treatment of the *Thamnophis sirtalis* complex in eastern North America.

The writer is indebted to Dr. Douglas A. Rossman who originally drew this situation in *Thamnophis sirtalis* nomenclature to his attention.



25 OCT 1963
PURCHASED